CONTENTS OF VOLUME 13

NUMBER 1

1 PATHOLOGY OF THE KIDNEY IN "TOXIC OIL EPIDEMIC SYNDROME." **José J. Navas-Palacios, Gabriel Usera-Sárraga, Richardo Gil-Martin, and Victor Gutierrez-Millet**

19 A COMPARISON OF ORGANOCHLORINE RESIDUES IN HUMAN ADIPOSE TISSUE AUTOPSY SAMPLES FROM TWO ONTARIO MUNICIPALITIES. **David T. Williams, Guy L. LeBel, and Elizabeth Junkins**

31 EFFECTS OF COAL DUST AND DIESEL EXHAUST ON IMMUNE COMPETENCE IN RATS. **M. Sharon Mentnech, Daniel M. Lewis, Stephen A. Olenchock, Judith C. Mull, Wayne A. Koller, and Trent R. Lewis**

43 BENZO[a]PYRENE UPTAKE BY LYMPH: A POSSIBLE TRANSPORT MODE FOR IMMUNOSUPPRESSIVE CHEMICALS. **D. L. Busbee, C. O. Joe, P. W. Rankin, R. L. Ziprin, and R. D. Wilson**

53 EFFECT OF BENOMYL ON THE REPRODUCTIVE DEVELOPMENT OF MALE RATS. **Susan D. Carter, Joy F. Hein, Georgia L. Rehnberg, and John W. Laskey**

69 ASCORBIC ACID POTENTIATES THE SUBSTRATE-SPECIFIC INHIBITION OF MIXED-FUNCTION OXIDATION AND THE STIMULATION OF NADPH OXIDATION CAUSED BY PARAQUAT. **Mark R. Montgomery and Patricia B. Shamblin**

83 CHRONIC TOXICITY AND CARCINOGENICITY EVALUATION OF FENVALERATE IN RATS. **C. M. Parker, D. R. Patterson, G. A. Van Gelder, E. B. Gordon, M. G. Valerio, and W. C. Hall**

99 EFFECT OF DI(2-ETHYLHEXYL) PHTHALATE ON DNA REPAIR AND LIPID PEROXIDATION IN RAT HEPATOCYTES AND ON METABOLIC COOPERATION IN CHINESE HAMSTER V-79 CELLS. **Douglas J. Kornbrust, Thomas R. Barfknecht, Peter Ingram, and John D. Shelburne**

117 SELECTIVE INHIBITION OF REPLICATIVE AND REPAIR DNA SYNTHESIS IN MOUSE COLON FOLLOWING ADMINISTRATION OF 1,2-DIMETHYLHYDRAZINE. **Thomas M. Koval**

125 TERATOGENIC ASSESSMENT OF THREE METHYLATED HYDRAZINE DERIVATIVES IN THE RAT. **W. C. Keller, C. T. Olson, K. C. Back, and C. L. Gaworski**

133 DETECTION OF DNA SINGLE-STRAND BREAKS INDUCED BY PROCARCINOGENS IN CHINESE HAMSTER OVARY CELLS COCULTURED WITH RAT HEPATOCYTES. **K. H. Yang, C. G. Shin, S. Y. Choe, and D. H. Kim**

145 THE EFFECT OF PHENOBARBITAL PRETREATMENT ON THE METABOLISM, COVALENT BINDING, AND CYTOTOXICITY OF AFLATOXIN B_1 IN PRIMARY CULTURES OF RAT HEPATOCYTES. **David J. Loury, Dennis P. H. Hsieh, and James L. Byard**

161 BOOK REVIEWS

177 ANNOUNCEMENTS

NUMBERS 2-3

EXTRAPOLATION MODELING OF INHALED TOXICANTS

v INTRODUCTION. **Fred J. Miller and Daniel B. Menzel, Guest Editors**

Part One: Introduction

183 OZONE: AN OVERVIEW OF ITS TOXICITY IN MAN AND ANIMALS **Daniel B. Menzel**

205 TOXICOLOGICAL DATA ON NO_x: AN OVERVIEW. **Paul E. Morrow**

Part Two: Pulmonary Dosimetry Models

231 INTRODUCTION. **Robert F. Phalen**

235 RESPIRATORY TRACT STRUCTURE AND FUNCTION. **Peter Gehr**

251 MASS TRANSPORT IN MAMMALIAN LUNGS: COMPARATIVE PHYSIOLOGY. **David E. Leith**

273 PHYSICOCHEMICAL PROCESSES AND THE FORMULATION OF DOSIMETRY MODELS. **John H. Overton, Jr.**

Part Three: Extrapolation of Structural and Functional Changes from Animals to Humans

297 INTRODUCTION. **Philip A. Bromberg**

301 ALTERATIONS IN LUNG STRUCTURE CAUSED BY INHALATION OF OXIDANTS. **James D. Crapo, Brenda E. Barry, Ling-Yi Chang, and Robert R. Mercer**

323 THE PATHOBIOLOGY AND EPIDEMIOLOGY OF HUMAN EMPHYSEMA. **William M. Thurlbeck**

345 RESPIRATORY FUNCTION RESPONSES OF ANIMALS AND MAN TO OXIDANT GASES AND TO PULMONARY EMPHYSEMA. **Joe L. Mauderly**

Part Four: Extrapolation of Metabolic Responses to Oxidant Exposure in Animals and Humans

365 INTRODUCTION. **David J. P. Bassett**

369 EARLY METABOLIC CHANGES IN RESPONSE TO LUNG INJURY: EXTRAPOLATION FROM ANIMALS TO HUMANS. **Edward R. Block**

387 TOXICITY OF OXYGEN RADICALS IN CULTURED PULMONARY ENDOTHELIAL CELLS. **Anne P. Autor, Ann C. Bonham, and Robert L. Thies**

397 *IN VITRO* SYSTEMS FOR EXPOSURE OF LUNG CELLS TO NO_2 AND O_3. **Ronald E. Rasmussen**

Part Five: Extrapolation of Host Defense Responses against Infection

415 AN ASSESSMENT OF ANIMAL MODELS FOR TESTING THE EFFECT OF PHOTOCHEMICAL OXIDANTS ON PULMONARY SUSCEPTIBILITY TO BACTERIAL INFECTION. **Elliot Goldstein**

423 OXIDANT-INDUCED ENHANCED SENSITIVITY TO INFECTION IN ANIMAL MODELS AND THEIR EXTRAPOLATIONS TO MAN. **Donald E. Gardner**

799 ADRENAL MEDIATION OF ETHANOL'S INHIBITION OF BENZO[a]PYRENE METABOLISM. **Matthew S. Bogdanffy, Robert A. Schatz, and David R. Brown**

811 GENERAL REPRODUCTION, PERINATAL–POSTNATAL, AND TERATOLOGY STUDIES OF NITROFURANTOIN MACROCRYSTALS IN RATS AND RABBITS. **J. P. Prytherch, M. L. Sutton, and E. P. Denine**

825 TOXICITY OF MONOCHLORAMINE IN RAT: AN ALTERNATIVE DRINKING-WATER DISINFECTANT. **Mohamed S. Abdel-Rahman, Duck H. Suh, and Richard J. Bull**

835 ELECTROPHYSIOLOGIC DEFICITS IN PERIPHERAL NERVE AS A DISCRIMINATOR OF EARLY HEXACARBON NEUROTOXICITY. **R. J. Anderson and C. B. Dunham**

845 TOXICITY OF METALLIC IONS IN THE LUNG: EFFECTS ON ALVEOLAR MACROPHAGES AND ALVEOLAR TYPE II CELLS. **Vincent Castranova, Linda Bowman, Jo Rae Wright, Howard Colby, and Philip R. Miles**

857 EFFECT OF SODIUM SELENITE ON THE CILIARY ACTIVITY, ADENOSINE TRIPHOSPHATE, AND PROTEIN SYNTHESIS IN MOUSE TRACHEA ORGAN CULTURES. **Marit Låg, Gunnar Paulsen, and Jon Jonsen**

865 CELLULAR DISTRIBUTION OF INORGANIC MERCURY AND ITS RELATION TO CYTOTOXICITY IN BOVINE KIDNEY CELL CULTURES. **W. M. Bracken, R. P. Sharma, and D. R. Bourcier**

879 EFFECTS ON THE DEVELOPMENT OF OFFSPRING OF FEMALE MICE EXPOSED TO PLATINUM SULFATE OR SODIUM HEXACHLOROPLATINATE DURING PREGNANCY OR LACTATION. **Rosemary B. D'Agostino, Bradley A. Lown, John B. Morganti, Elizabeth Chapin, and Edward J. Massaro**

893 EFFECT OF 0.64 PPM OZONE ON RATS WITH CHRONIC PULMONARY BACTERIAL INFECTION. **Robert L. Sherwood, Alan Kimura, Richard Donovan, and Elliot Goldstein**

905 REFLEX CARDIOPULMONARY RESPONSES BY STIMULATION TO TYPE J RECEPTORS IN RATS EXPOSED TO NO_2. **Hirokazu Tsubone and Akira K. Suzuki**

919 RESPONSE OF PULMONARY CELLULAR DEFENSES TO THE INHALATION OF HIGH CONCENTRATIONS OF DIESEL EXHAUST. **Kenneth A. Strom**

945 SULFUR DIOXIDE–INDUCED CHRONIC BRONCHITIS IN BEAGLE DOGS. **S. A. Greene, R. K. Wolff, F. F. Hahn, R. F. Henderson, J. L. Mauderly, and D. L. Lundgren**

959 TOXICITY OF A PHTHALATE ESTER IN THE DIET OF A PENAIED SHRIMP. **James F. Hobson, Dean E. Carter, and Donald V. Lightner**

969 BEHAVIORAL MODIFICATION OF ESTUARINE FISH EXPOSED TO SULFUR DIOXIDE. **Lenwood W. Hall, Jr., Dennis T. Burton, William C. Graves, and Stuart L. Margrey**

979 CADMIUM IN WHEAT GRAIN: ITS NATURE AND FATE AFTER INGESTION. **George J. Wagner, Elizabeth Nulty, and Marian LeFevre**

441 INTERSPECIES COMPARISONS OF PARTICLE DEPOSITION AND MUCOCILIARY CLEARANCE IN TRACHEOBRONCHIAL AIRWAYS. **Morton Lippmann and Richard B. Schlesinger**

471 SIMILARITIES OF HOST DEFENSE MECHANISMS AGAINST PULMONARY INFECTIOUS DISEASES IN ANIMALS AND MAN. **Gareth M. Green**

479 BOOK REVIEWS

In Vitro Toxicity Testing of Environmental Agents: Current and Future Possibilities. Part A: Survey of Test Systems, and Part B: Development of Risk Assessment Guidelines, *reviewed by George R. Douglas, Earle R. Nestmann,* and *Claire A. Franklin*; Clinical Management of Poisoning and Drug Overdose, *Robert Peterson*; Guide to the Chemicals Used in Crop Protection, *Gunter Zweig*; Aquatic Pollution: An Introductory Text, *Michael G. Richard.*

485 ANNOUNCEMENTS

NUMBERS 4–6

487 FUNCTIONAL AND BIOCHEMICAL INDICATORS OF PNEUMOCONIOSIS IN MICE: COMPARISON WITH RATS. **Gary E. Hatch, James A. Raub, and Judith A. Graham**

499 COMBINED USE OF A WATER-INSOLUBLE CHEMICAL DELIVERY SYSTEM AND A METABOLIC ACTIVATION SYSTEM IN WHOLE EMBRYO CULTURE. **Kirk T. Kitchin and Marian T. Ebron**

511 ON THE APPLICATION OF CULTURED NEUROBLASTOMA CELLS IN CHEMICAL TOXICITY SCREENING. **Erik Walum and Anders Peterson**

521 THE MUTAGENICITIES OF SEVEN COUMARIN DERIVATIVES AND A FURAN DERIVATIVE (NIMBOLIDE) ISOLATED FROM THREE MEDICINAL PLANTS. **Anthony O. Uwaifo**

531 MUTAGENIC AND CARCINOGENIC ACTIVITY OF A HYDROTREATED COAL LIQUID. **M. E. Frazier and D. D. Mahlum**

545 AIRBORNE ENDOTOXINS IN A RICE PRODUCTION COMMUNE IN THE PEOPLE'S REPUBLIC OF CHINA. **Stephen A. Olenchock, Judith C. Mull, David C. Christiani, Shen Yi-e, and Lu Pei-lian**

553 EFFECT OF SIMULTANEOUS PRENATAL EXPOSURE TO OCHRATOXIN A AND CITRININ IN THE RAT. **K. Mayura, R. Parker, W. O. Berndt, and T. D. Phillips**

563 AFLATOXIN AND DIMETHYL SULFOXIDE INFLUENCE ON RADIOMANGANESE DISTRIBUTION AND RETENTION IN NEONATE MICE. **J. S. Thompson and G. C. Llewellyn**

575 EFFECTS OF CHRONIC EXPOSURE TO AFLATOXIN B_1 AND AFLATOXIN M_1 ON THE *IN VIVO* COVALENT BINDING OF AFLATOXIN B_1 TO HEPATIC MACROMOLECULES. **Dana N. Loury and Dennis P. H. Hsieh**

589 IDENTIFICATION OF AFLATOXIN B_1 IN GRAIN ELEVATOR DUSTS IN CENTRAL ILLINOIS. **Thomas M. Zennie**

595 COMPARISON OF THE ACUTE TOXICITIES OF *N*-NITROSOTHIAZOLIDINE AND *N*-NITROSOMORPHOLINE. **K. Nishie, W. Fiddler, and J. W. Pensabene**

609 INDUCTION OF TUMORS OF THE NASAL CAVITY IN RATS BY CONCURRENT FEEDING OF THIRAM AND SODIUM NITRITE. **William Lijinsky**

615 DETERMINATION OF *N*-NITROSAMINES AND *N*-NITROSAMINE PRECURSORS IN RUBBER NIPPLES FROM BABY PACIFIERS BY GAS CHROMATOGRAPHY-THERMAL ENERGY ANALYSIS. **Harold C. Thompson, Jr., Stanley M. Billedeau, Barbara J. Miller, Eugene B. Hansen, Jr., James P. Freeman, and Marilyn L. Wind**

633 HALOACETONITRILE EXCRETION AS THIOCYANATE AND INHIBITION OF DIMETHYLNITROSAMINE DEMETHYLASE: A PROPOSED METABOLIC SCHEME. **Michael A. Pereira, Luan-Ho C. Lin, and Joan K. Mattox**

643 CHROMOSOMAL ABERRATIONS INDUCED BY SODIUM NITRITE IN BONE MARROW OF ADULT RATS AND LIVER CELLS OF TRANSPLACENTALLY EXPOSED EMBRYOS. **Soheir M. El Nahas, Morton Globus, and Swani Vethamany-Globus**

649 EFFECT OF DOSE ON THE INHIBITION OF CARCINOGENESIS/MUTAGENESIS BY AROCLOR 1254 IN RAINBOW TROUT FED AFLATOXIN B_1. **Dennis W. Shelton, Jerry D. Hendricks, Roger A. Coulombe, and George S. Bailey**

659 COLESTIPOL AND ENERGY RESTRICTION AS AN APPROACH TO HASTEN REMOVAL OF PPBS FROM CHICKENS. **Donald Polin and Richard A. Leavitt**

673 ACUTE RESPONSE OF RAT LIVER MICROSOMAL LIPIDS, LIPID PEROXIDATION, AND MEMBRANE ANISOTROPY TO A SINGLE ORAL DOSE OF POLY-BROMINATED BIPHENYLS. **John T. Bernert, Jr. and Donald F. Groce**

689 INFLUENCE OF DIET AND OTHER FACTORS ON THE LEVELS OF ORGANO-CHLORINE COMPOUNDS IN HUMAN ADIPOSE TISSUE IN FINLAND. **Helena Mussalo-Rauhamaa, Heikki Pyysalo, and Raija Moilanen**

705 THE EFFECTS OF DIELDRIN AND CHLORDIMEFORM ON LEARNING AND MEMORY IN THE COCKROACH, *PERIPLANETA AMERICANA*: A STUDY IN BEHAVIOR TOXICOLOGY. **M. A. Topinka, E. M. Eisenstein, D. Siegel, R. Trofeli, and D. Barraco**

721 PHARMACOKINETICS OF DIFLUBENZURON IN TWO TYPES OF CHICKENS. **Joseph C. Opdycke and Robert E. Menzer**

735 ANIMAL LIMB REGENERATION IN ADULT NEWTS EXPOSED TO THE FUNGICIDE MANEB 80. A HISTOLOGICAL STUDY. **Teresa Zavanella, Nicoletta Pacces Zaffaroni, and Elio Arias**

747 ETHYLENETHIOUREA-INDUCED HINDPAW DEFORMITIES IN MICE AND EFFECTS OF METABOLIC MODIFIERS ON THEIR OCCURRENCE. **K. S. Khera**

757 DERMAL ONCOGENICITY BIOASSAYS OF DI-*sec*-BUTOXYACETOPHENONE AND DIETHOXYACETOPHENONE. **Linval R. DePass, Edward H. Fowler, and Carrol S. Weil**

763 MALE REPRODUCTIVE TOXICITY AND RECOVERY ASSOCIATED WITH ACUTE ETHOXYETHANOL EXPOSURE IN RATS. **D. J. Oudiz, H. Zenick, R. J. Niewenhuis, and P. M. McGinnis**

777 METABOLISM OF 1,2,3,4-, 1,2,3,5-, AND 1,2,4,5-TETRACHLOROBENZENE IN THE RAT. **I. Chu, D. C. Villeneuve, A. Viau, C. R. Barnes, F. M. Benoit, and Y. H. Qin**

787 METABOLISM OF 2,4-DICHLOROPHENOL BY ISOLATED PERFUSED RAT LIVER. **Satu M. Somani, Terry Smart, and Abdul Khalique**

TECHNICAL NOTE

991 COMMENTS ON "PERSISTENCE OF SYMPTOMS AFTER MILD TO MODERATE ACUTE ORGANOPHOSPHATE POISONING AMONG 19 FARM FIELD WORKERS" BY WHORTON AND OBRINSKY. **John E. Midtling, Molly J. Coye, Paul Barnett, Antonio R. Velasco, Charlie L. Clements, Michael A. O'Malley, Pablo Romero, Michael W. Tobin, and Theodore G. Rose**

993 BOOK REVIEWS

Soot in Combustion Systems and Its Toxic Properties, *reviewed by Simon Lock*; Environmental Aspects of Cancer: The Role of Macro and Micro Components of Foods, *Sam Kacew*.

996 ANNOUNCEMENTS

FOLLOWING PAGE 997:

TITLE PAGE TO VOLUME 13

CONTENTS OF VOLUME 13

AUTHOR INDEX TO VOLUME 13

SUBJECT INDEX TO VOLUME 13